



Introduction SPARQL Query Service

Dagbani Capacity Building|Dnshitobu



Follow along



SPARQL Query Service

WIKIDATA Query Service in Brief

<https://query.wikidata.org/>
More documentation on Wikidata

Triple statement:

?subject ?property ?object .

Important prefixes

item	property	variable
wd:	wdt:	?
wd:Q7186	wdt:P101	?item

Property's statement	Statement's object prop.	Statement's qualifier
p:	ps:	pq:
p:P101	ps:P101	pq:P101

Important functions

SELECT -- calls variables to be displayed

DISTINCT -- after SELECT, removes duplicate rows

WHERE { ... } -- contains the query criteria

Inside WHERE { ... }

OPTIONAL { ... } -- contains optional statements that can be empty in the results

MINUS { ... } -- removes content that meets a criteria

SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" . }
-- calls a label service activated with camelcase variables (i.e SELECT ?itemLabel)

After WHERE { ... }

LIMIT -- provides a maximum number of results

ORDER BY - selects variable(s) by which to order results

#defaultview: - selects a default view for results

Query helper

Write the query

Examples

Share a link

Run the query

Choose a language

Press **ctrl + space** while typing to get search suggestions, esp. after prefixes

The screenshot shows the Wikidata Query Service interface. At the top, there's a header with the Wikidata logo and navigation links like 'Examples', 'Help', 'Tools', and 'English'. Below the header is a query editor with a text area containing a SPARQL query: `1 SELECT ?item WHERE { 2 ?item wdt:P31 wd:hum 3 }`. To the right of the query editor is a search suggestions dropdown menu showing results for 'human pregnancy (Q1152887)'. Callout boxes point to various UI elements: 'Query helper' points to the top left, 'Write the query' points to the query text area, 'Examples' points to the 'Examples' link, 'Share a link' points to the share icon, 'Run the query' points to the play button, 'Choose a language' points to the language dropdown, and 'Press ctrl + space while typing to get search suggestions, esp. after prefixes' points to the search suggestions dropdown.



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of Wikidata Query Service
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Digital version:
bit.ly/wikidata-onepage

<http://bit.ly/wikidata-onepage>

Important symbols

. - terminates a triple

Example: ?item wdt:P31 wd:Q5 .

; - allow several properties for a subject.

Example: ?item wdt:P31 wd:Q5 ;
wdt:P106 wd:Q36180 .

/ - joins two properties

Example:
?item wdt:P31 wd:Q5 .
?item wdt:P106/P131 wd:Q36180 .

***** - recursively extends last property

Example:
?item wdt:P31 wd:Q5 .
?item wdt:P106/P131* wd:Q36180 .

- comments out subsequent text

Example:
?item wdt:P31 wd:Q5 . #instance of human

Tools using queries

PetScan - powerful toolbox for creating lists based on categories and Wikidata

WDFIST -- tool for freely licensed images for Wikidata items

Histropedia - Timeline building tool

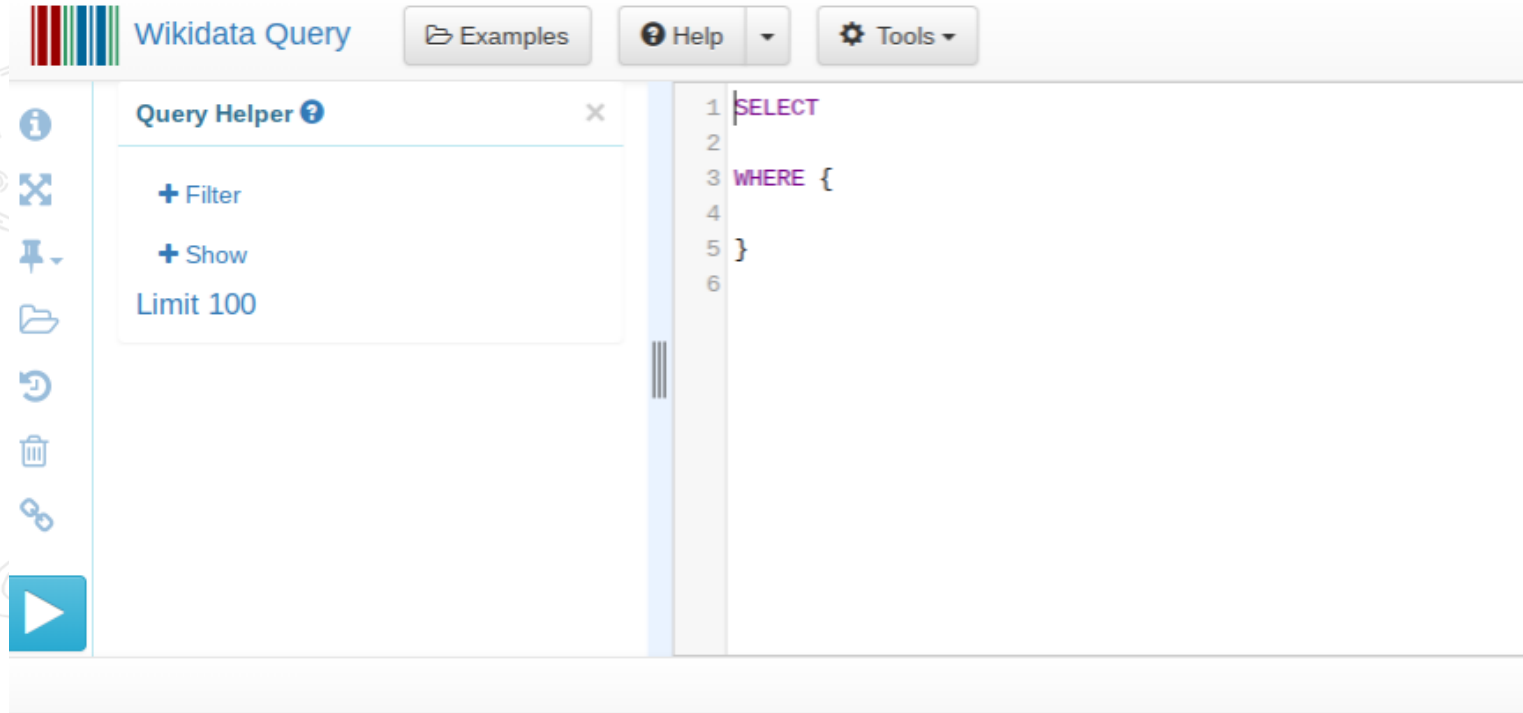
ListeriaBot - generates on-wiki lists based on queries - uses local versions of [Template:Wikidata list](#) and [Template:Wikidata list end](#)

Finding help

[Wikidata:Request a query](#) - on-wiki request forum

[@Wikidatafacts](#) - twitter account supported by a volunteer who can help create queries

Queries start with **Select Where {...}**



The screenshot displays the Wikidata Query interface. At the top, there is a header bar with the Wikidata logo, the text "Wikidata Query", and three buttons: "Examples", "Help", and "Tools". Below the header, the interface is split into two main sections. On the left is the "Query Helper" sidebar, which contains an information icon, a close button, and three options: "+ Filter", "+ Show", and "Limit 100". On the right is the query editor, which shows a SQL-like query on a line-by-line basis:

```
1 SELECT
2
3 WHERE {
4
5 }
6
```

At the bottom left of the interface, there is a large blue play button icon.

Making Queries Human readable {...}

Wikidata Query Service

Examples Help More tools Query Builder

English

Query Helper

+ Filter

country of citizenship Tunisia

+ Show

Limit

```
1 SELECT ?item ?itemLabel
2 WHERE {
3   ?item wdt:P27 wd:Q948.
4
5   SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". }
6 }
```

Tunisian children's author

 edit[In more languages](#) Configure

Language	Label	Description	Also known as
English	Samar Samir Mezghanni	Tunisian children's author	
Spanish	Samar Samir Mezghanni	No description defined	
Traditional Chinese	No label defined	No description defined	
Chinese	No label defined	No description defined	

[All entered languages](#)

Statements






instance of	human	 edit
	0 references	+ add reference
		+ add value

image	 Samar Samir Mezghanni SQ Faces of the revolution at TED (cropped).png 	 edit
	0 references	+ add reference
		+ add value

sex or gender	female	 edit
	0 references	+ add reference
		+ add value

country of citizenship	 Tunisia	 edit
------------------------	--	--

And a search for a Wikidata item that you expect in the results, to identify properties and items to start the query with

Then add several triples as filters, and a variable for output

The screenshot shows the Wikidata Query interface. The top navigation bar includes the Wikidata logo, the text "Wikidata Query", and buttons for "Examples", "Help", and "Tools". The language is set to "English".

The "Query Helper" panel on the left contains three filter conditions:

- country of citizenship: Tunisia
- sex or gender: female
- instance of: human

The query editor on the right shows the following SQL-like query:

```
1 SELECT ?item
2
3 WHERE {
4   ?item wdt:P27 wd:Q948.
5   ?item wdt:P21 wd:Q6581072.
6   ?item wdt:P31 wd:Q5.
7 }
8
```

The results section at the bottom shows a table with the following data:

item
wd:Q1150847
wd:Q1150854
wd:Q1356729

Humans need to be able to read results-- add the label service

The screenshot shows the Wikidata Query interface. The query editor contains the following SPARQL query:

```
1 SELECT ?item ?itemLabel
2
3 WHERE {
4 ?item wdt:P27 wd:Q948.
5 ?item wdt:P21 wd:Q6581072.
6 ?item wdt:P21 wd:Q5.
7 SERVICE wikibase:label { bd:serviceParam wikibase:language "fr, ar, en".
8 }
9 }
```

The Query Helper panel on the left shows the following filters:

- country of citizenship: Tunisia
- sex or gender: female
- instance of: human

The results panel at the bottom shows 607 results in 1160 ms. The table below displays the first three results:

item	itemLabel
Q29577472	سناء الصالحي
Q29577474	هدى تقية
Q29577479	سماح دمق

Let's query Wikidata

Resources

- Textual tutorials
 - [SPARQL Tutorial](#)
 - [Blog post detailing SPARQL](#)
 - [SPARQL Slide Deck](#)
 - [From Wikibooks](#)
- Video tutorials
 - * [Asaf Bartov tutorial](#)
- [Wikidata Query builder](#)